Neutron Radiography

Capabilities/Facilities

Neutron Radiography Reactor (NRAD), Engineering Development Laboratory (EDL), Fuel Manufacturing Facility (FMF), and Hot Fuel Examination Facility (HFEF).

Materials

NRAD: Neutron radiography of irradiated and unirradiated fuels and materials. EDL: X-ray radiography of materials with low levels of activity. FMF: X-ray radiography of Category I quantities of nuclear materials.

Scientific/Engineering Issues

Weld integrity, postirradiation examination of experiments, proof of configuration of experiments.

Staff

R. Fielding, S.L. Hayes.

Recent Projects

- Ongoing radiography of fuel specimens and welds.

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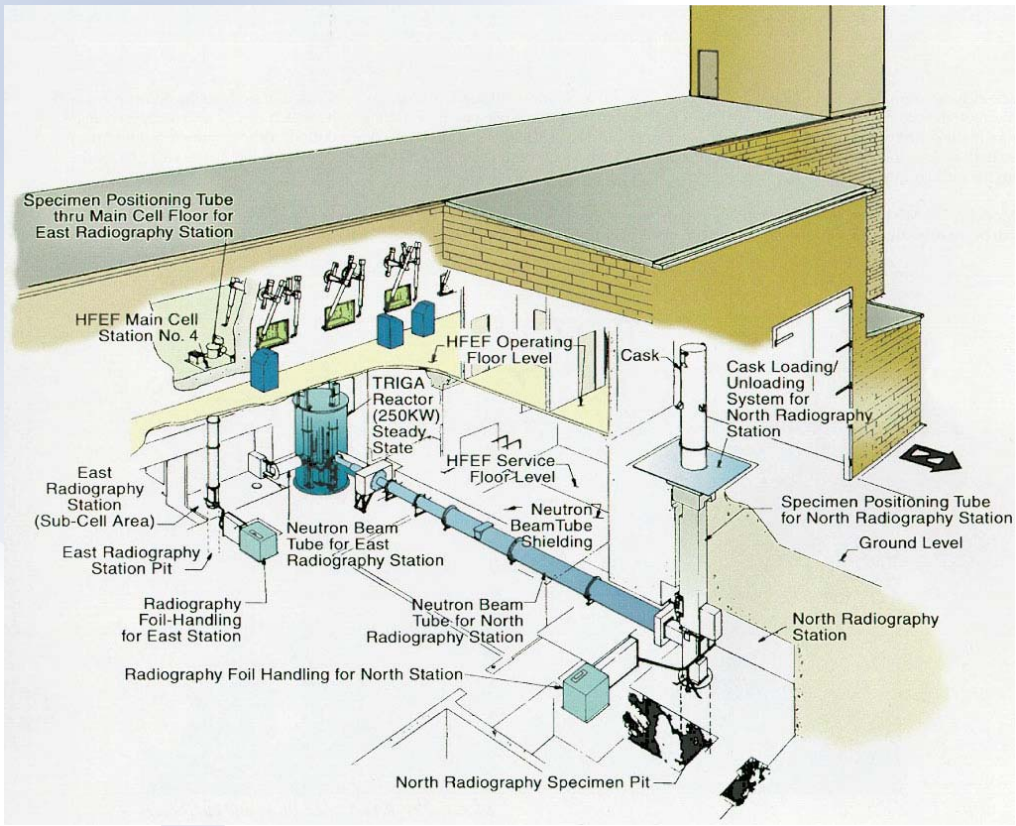

Hot Fuel Examination Facility with neutron radiograph.

Science

INL Idaho National Laboratory

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Publications

"Fast Neutron Radiography for Composite Materials Evaluation and Testing," K.H. Kim, R.T. Klann and B.B. Raju, *Nuclear Instruments & Methods in Physics Research Section A – Accelerators Spectrometers, Detectors, and Associated Equipment*, Vol. 422, p. 929, February 1999.

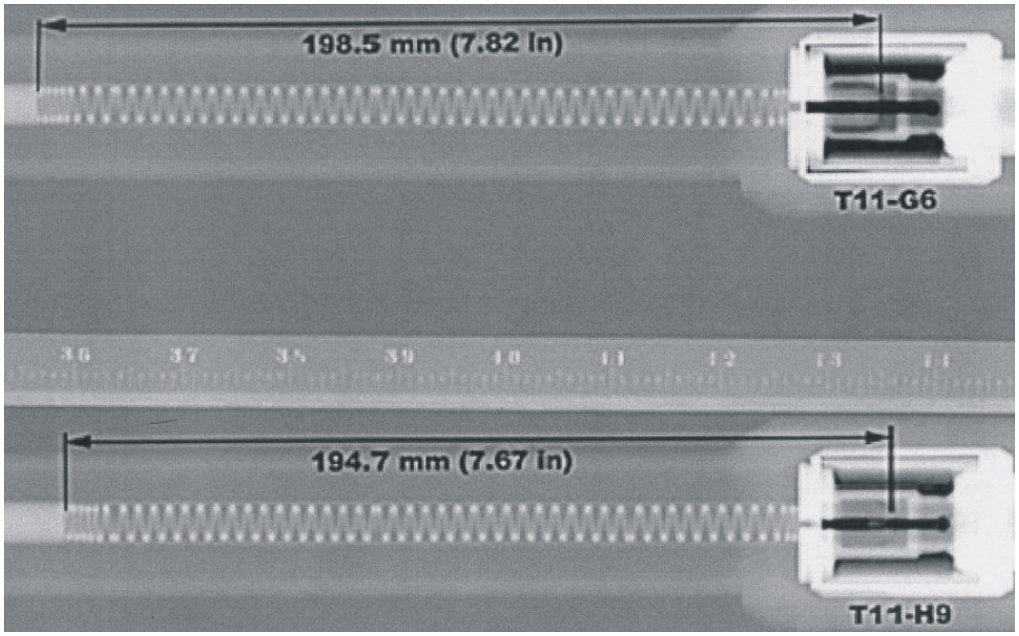
For more information

Richard N. Wright, Ph.D.
(208) 526-6127
Richard.Wright@inl.gov

Douglas C. Crawford, Ph.D.
(208) 533-7456
Douglas.Crawford@inl.gov

www.inl.gov/env-energyscience/materials

INL is a U.S. Department of Energy national laboratory operated by Battelle Energy Alliance



Neutron radiograph of PWR fuel rod plena and end fittings.